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The Use of VA and Non-VA Mental Health Services by Female Veterans

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OBJECTIVES. **This study compared Department of Veterans Affairs (VA) and non-VA mental health service use among male and female veterans. Because female veterans are a distinct minority in VA, it was hypothesized that they would be less likely to use VA mental health care than would male veterans.**

METHODS. **Using data from a national sample of Vietnam and Vietnam-era male (n = 1,612) and female (n = 736) veterans, the following were examined: (1) gender differences in use of VA mental health services, (2) gender differences in use of non-VA mental health services, and (3) differences in utilization of mental health services across subgroups defined by psychiatric diagnosis, adjusting for sociodemographic and need variables.**

RESULTS. **Female veterans were equally likely to use VA mental health services as male veterans, but were substantially more likely to use non-VA mental health services. This suggests that the demand for mental health services overall is substantially greater among female veterans than among male veterans and, by implication, that the equal levels of observed VA service use actually represent underutilization of VA services on the part of female veterans. Logistic regression models showed that these utilization patterns were consistent across diagnostic subgroups.**

CONCLUSIONS. **Special efforts, such as the development of women's specialty mental health clinics, may be needed to enhance the acceptability of VA mental health services to female veterans. This study also highlights the importance of considering overall demand for services in addition to more objective diagnostic data in evaluating the adequacy of service delivery and its accessibility.**

Key words: mental health services; females; utilization. (Med Care 1998;36:1524–1533)

There has been considerable concern recently about women's access to appropriate health care services. Women have been found to have difficulty getting and maintaining health insurance coverage, receiving appropriate diagnostic screening tests (eg, cervical cancer screening, mammography), and getting treatment for serious medical problems such as heart disease and kidney failure.[1–4] Women's access to and use of mental health services also has been of concern. Mental health services are not available to large sectors of the female population, even among those who have otherwise adequate health insurance.[1] In addition, studies have indicated that in treating serious mental illness, providers often fail to recognize the different needs, both medical and psychiatric, of male and female patients.[5–7]

A number of studies have shown that, given equal access to services, women seek care for mental or emotional problems more often than

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men, even after controlling for gender differences in the prevalence of mental disorder.[8–11] Further examination has indicated that gender differences may be concentrated in the use of certain types of services and that need for services is the single biggest predictor of utilization. In the Epidemiologic Catchment Area (ECA) study, for example, although women with a psychiatric disorder were more likely to utilize nonspeciality mental health care than men (from their medical doctors or clergy, for example), they were no more likely than men to seek care from mental health specialists or facilities.[12] As Leaf and Bruce[13] point out, however, it is not clear that these findings apply to all subgroups or populations and to all systems of mental health care.

This study utilized a large community-based sample of Vietnam-era veterans to explore gender differences in use of Department of Veterans Affairs (VA) and non-VA mental health care. Veterans are a potentially informative population in which to study gender differences in mental health care utilization. The VA is a national health care system delivering comprehensive inpatient and outpatient services primarily to poor and disabled veterans. Because it serves disadvantaged populations, it is more similar to public health care systems than to private sources, but it includes the same range of health care services, with special emphasis on substance abuse treatment (because of the high proportion of male patients) and the treatment of war-related posttraumatic stress disorder (because of its particular relevance to veterans). VA mental health programs treated approximately 500,000 veterans per year at a cost of $1.2 billion during the years of this study.

Male and female veterans have equal access to the VA health care system, thus enabling us to assess differences in utilization resulting from factors other than eligibility or insurance coverage. Within VA, however, female veterans are a distinct minority, making up only approximately 4% of the veteran population. Because of the minority status of female veterans in VA and because of the fact that the VA system originally was oriented toward the treatment of men, VA offers an exaggerated, but illustrative, view of the problems that women often face in mental health care systems. Specifically, we hypothesized that female veterans would be less likely than male veterans to utilize VA mental health care services.[14]

This hypothesis is based both on anecdotal evidence that female veterans have a difficult time in VA maintaining privacy and feeling safe and on the face validity of the idea that being a small minority would decrease the acceptability of mental health care services for women.[15] Two previous empirical studies have examined this hypothesis, with conflicting results.[16,17] The first study involved a cross-sectional national sample of 70,000 veterans in VA psychiatric or substance abuse care and found that the proportion of women among veterans utilizing VA mental health services was the same as the proportion of women in the general veteran population, suggesting that there was no underutilization of VA mental health services among female veterans.[16] The second study examined a national community sample of 7,300 veterans and found that women who reported having been diagnosed with a mental or emotional problem were the group least likely to utilize VA outpatient services.[17]

The current study has three advantages compared with previous studies. First, it was conducted on a national community-based sample of veterans with both treated and untreated mental health problems. Second, psychiatric diagnoses were assessed independently through a structured diagnostic interview instead of through self-report or medical records. Third, data were collected on the use of all types of mental health services, including VA, non-VA, medical, and informal care systems.

The data came from the National Vietnam Veterans Readjustment Study (NVVRS), a survey of veterans who served in the Vietnam era (1964–1975). We utilized these data to address the following questions: (1) do female and male veterans differ in their use of VA mental health services, controlling for other determinants of use; (2) do female and male veterans differ in their use of non-VA, primary care, or informal mental health services, controlling for other determinants of use; (3) what characteristics predict choice of VA as mental health care provider; and (4) does the relation between gender and VA mental health use differ across diagnostic subgroups?

Methods

Data for these analyses came from the NVVRS, a Congressionally mandated study of the prevalence of posttraumatic stress disorder (PTSD) and other psychological problems in Vietnam veterans

to have utilized VA mental health services, non-VA mental health services, medical services for mental health needs, or informal services for mental health needs. All logistic regression models were adjusted for age, marital status, income, education, employment, service-connected disability status, psychiatric diagnoses, and per capita expenditures for mental health care.

Next, the same analyses were conducted among the subgroup of veterans who had a need for mental health services, as indicated by the presence of at least one DIS psychiatric or substance abuse diagnosis. Out of the total sample, 895 men (55.52%) and 215 women (29.21%) met diagnostic criteria in their lifetime for at least one psychiatric disorder, including substance abuse and PTSD. Last, analyses predicting mental health service use were conducted separately for those respondents with depression (91 men, 71 women), PTSD (365 men, 45 women), substance abuse (675 men, 65 women), or other mental illness (395 men, 145 women).

Results

Table 1 presents data on male and female veteran sociodemographic indicators and measures related to the need for mental health services. As can be seen in the Table, female veterans were significantly more likely than male veterans to be white and to have never married. They had significantly higher incomes and more education but were less likely to be working at the time they were interviewed. There were differences in rates of depression (males = 5.7%, females = 9.7%; P = 0.001), PTSD (males = 22.7%, females = 6.16%; P = 0.0001), substance abuse (males = 42.16%, females = 9.05%; P = 0.0001), and other psychiatric disorder (males = 24.5%, females = 19.7%; P = 0.01). Female veterans were also significantly older and had fewer total number of psychiatric diagnoses. They were not significantly different from male veterans in their likelihood of having a service-connected disability. This profile is in keeping with the general profile of female veterans from the Vietnam era, who were primarily nurses and thus older and better educated than the typical male Vietnam-era veteran.

There were no significant gender differences in use of VA mental health services, either inpatient (P = 0.4155) or outpatient (P = 0.2683; Table 2). Although the rates of VA use among women were lower than among men (5.7% of women used VA, 10.2% of men), these differences were not significant after adjusting for sociodemographic characteristics, rates of mental illness, and availability of mental health services. Female veterans, however, were more likely than male veterans to utilize all types of non-VA mental health services, both formal and informal. In particular, they were more likely to use Community Mental Health Centers (OR = 3.11, P = 0.0002), private practitioners (OR = 4.04, P = 0.0001), and medical doctors (OR = 3.11, P = 0.0001) for mental health treatment needs. Use of Alcoholics Anonymous and Narcotics Anonymous were not significantly different across gender (P = 0.3238), although the use of clergy for mental health concerns was higher among women (OR = 2.29, P = 0.0001).

It should be noted from Table 2 that the unadjusted utilization rates of VA services were, for both men and women, lower than utilization rates of non-VA services. This is partially explained by the fact that, for large geographic areas, the supply of non-VA mental health services is greater than the supply of VA mental health services.[21]

Table 3 presents the parameter estimates for the complete model predicting any VA mental health care utilization separately for men and women. Age was not a significant predictor of VA use among men, but it was significant among women. Men who were not currently employed, who were making less than $9,000 per year, who had public insurance (eg Medicaid, Medicare), who had a service-connected disability, or who had a lifetime diagnosis of any mental disorder were significantly more likely to utilize VA mental health services. Among women, the factors that predicted higher VA utilization included younger age, being previously married, higher education, having a service-connected disability, and having a mental disorder other than depression or PTSD. Per capita expenditures either for VA or non-VA mental health care did not significantly predict VA utilization in men or women.

Table 4 presents the comparison between male and female veterans among those who met DIS diagnostic criteria for at least one psychiatric or substance abuse disorder in their lifetime. Utilization patterns remained essentially the same as in Table 2. Female veterans with a psychiatric diagnosis were, once again, no less likely than men to utilize VA mental health services (P = 0.3663), but were more likely to utilize all formal (OR = 5.17,

TABLE 1. Sociodemographic Characteristics of a Sample of Vietnam and Vietnam-Era Veterans (n = 2,348)

Variable	Males		Females		P
	n	%	n	%	
Race					
White	786	48.82	668	91.01	0.0001
Black	423	26.27	36	4.9	
Hispanic	379	23.54	23	3.13	
Other	22	1.37	7	0.95	
Marital status					
Married	1,170	72.58	393	53.4	0.0000
Divorced/separated	323	20.04	121	16.44	
Widowed	8	0.5	12	1.63	
Never married	111	6.89	210	28.53	
Income					
$0–$9,999	129	8.31	16	2.24	0.0001
$10,000–$19,999	190	12.24	75	10.52	
$20,000–$39,999	657	42.33	264	37.03	
$40,000+	576	37.11	358	50.21	
Education					
Less than HS	207	12.86	3	0.41	0.0000
HS diploma	431	26.77	141	19.21	
Some college	658	40.87	203	27.66	
College+	314	19.5	387	52.72	
Health insurance					
None	208	12.9	41	5.57	0.0001
Private	1,069	66.32	431	58.56	
Private and public	142	8.81	146	19.84	
Public	185	11.48	113	15.35	
Unknown	8	0.5	5	0.68	
Employment					
Working	1,373	85.44	506	68.84	0.0001
Not working	234	14.56	229	31.16	
Service-connected (SC) disability					
Psychiatric	36	0.78	6	0.22	0.1360
Nonpsychiatric	481	22.03	177	17.06	
No SC disability	1,095	77.19	553	82.72	
Psychiatric diagnoses					
Depression	91	5.65	71	9.66	0.0010
PTSD	365	22.7	45	6.16	0.0001
Substance abuse	675	42.16	66	9.05	0.0001
Other diagnoses	395	24.5	145	19.7	0.0100
Age (Mean, SD)	41.39	0.16	45.56	0.24	0.0001
Psychiatric diagnoses (Mean, SD)	1.52	0.04	0.59	0.06	0.0001
Per capita expenditures, VA (mean, SD)	45.67	20.62	50.14	26.95	0.3256
Per capita expenditures, non-VA (mean, SD)	80.24	29.87	87.95	31.2	0.2174

TABLE 2. Use of Mental Health Services Among a Sample of Vietnam and Vietnam-Era Veterans

	Males (n = 1,612)		Females (n = 736)			
	n	%	n	%	OR*	P
Any VA mental health service	164	10.22	42	5.72	1.33	0.4383
Use of VA outpatient MH service	153	9.54	42	5.72	1.36	0.2683
Use of VA inpatient MH service	72	4.47	11	1.49	0.67	0.4155
Non-VA mental health service	393	27.1	310	45.31	3.81	0.0001
Use of CMHC	57	3.54	34	4.62	3.11	0.0002
Use of private practitioner	276	17.17	255	34.69	4.04	0.0001
Use of other non-VA MH	203	12.59	143	19.43	3.61	0.0001
Medical outpatient MH service	223	13.89	162	22.1	3.11	0.0001
Any informal MH service	242	21.66	179	30.74	2.83	0.0001
Use of minister	196	12.16	140	19.02	2.29	0.0001
Use of AA or NA	73	4.55	19	2.59	1.44	0.3238
Use of other informal MH services	115	31.51	74	32.74	1.22	0.4160

PTSD, posttraumatic stress disorder; MH, mental health; CMHC, community mental health center; AA, Alcoholics Anonymous; NA, Narcotics Anonymous

*Odds ratio adjusted for age, marital status, income, education, employment, service connection, health insurance, per capita expenditures on VA and non-VA mental health care, and psychiatric diagnoses.

P = 0.0001) and informal (OR = 3.45, P = 0.0001) non-VA mental health services.

Given equal overall utilization rates of VA mental health services among male and female veterans, we also examined which women, among those that used mental health services, had used VA mental health services. Using the subsample of veterans who had used any mental health services, we fit logistic regression models separately for men and women to explore which factors predicted VA use (not shown in a table). This analysis revealed that the factors predicting VA use were similar for men and women. Lower income and a greater number of lifetime psychiatric diagnoses were the most significant predictors of VA service use in both men and women.

Discussion

This article presents data from an intensive national survey of male and female veterans who served during the Vietnam Era. The data indicate that: (1) female Vietnam-era veterans did not utilize VA mental health services at a lower rate than male Vietnam-era veterans; (2) female veterans utilized non-VA mental health services of all kinds at a much higher rate than male veterans; (3) the most distinguishing characteristics of veterans who use VA services were lower socioeconomic status and illness severity, as indicated by income, reduced access to private health insurance, and psychiatric morbidity; and (4) the observed patterns of VA utilization did not differ across psychiatric diagnosis.

These data initially present a puzzling paradox. At first glance, they suggest that female veterans are not less likely than male veterans to obtain mental health services from VA after taking variation in levels of illness into account. They thus confirm the results of a previous study that found the age-adjusted proportion of female veterans in a national survey of VA mental health service users to be no different from that in the general population.[16]

Conversely, data from a second study based on national survey data suggested that female veterans who identified themselves as having had mental health problems were less likely to have used VA services.[17] In addition, anecdotal evidence such as testimony by female veterans for Congressional committees has indicated that women have significant difficulty maintaining their privacy and feeling safe in VA and do not feel welcome or at home in VA.[15,22]

The key to understanding and resolving this paradox is suggested by the data on non-VA service use. Female veterans were much higher utilizers of non-VA services than were male veterans,

TABLE 3. Full Logistic Regression Model Predicting the Probability of VA Mental Health Services Use by a Sample of Vietnam and Vietnam-Era Veterans

Variable	Females		Males	
	Odds Ratio	*P*	Odds Ratio	*P*
Age (yr)	0.95	0.0012	0.98	0.3768
Employed (ref: currently working)	1.04	0.7384	1.41	0.0144
Marital status (ref: never married)				
Married	1.69	0.0718	1.12	0.7921
Separated/widowed/divorced	2.57	0.0021	1.25	0.6212
Income (ref: $40,000/yr or more)				
$0–$9,000	0.66	0.4216	1.92	0.0097
$10,000–19,000	1.31	0.2932	1.27	0.2560
$20,000–39,000	1.06	0.7955	0.73	0.0818
Health insurance (ref: private insurance)				
None or unknown	0.99	0.9854	3.67	0.0048
Public insurance	1.41	0.2679	3.63	0.0009
Education (ref: less than high school)				
High school	7.88	0.0807	0.98	0.9099
College or more	0.34	0.012	1.18	0.3960
Service-connected disability (ref: no)	1.76	0.0493	2.95	0.0001
Psychiatric disorders (ref for each: no)				
Depression	2.31	0.0631	2.34	0.0061
Substance abuse	8.08	0.0001	1.85	0.0099
PTSD	1.08	0.877	3.43	0.0001
Other mental disorder	3.58	0.0001	3.74	0.0001
Regional per capita expenditures on VA mental health ($/veteran)	1.00	0.5542	1.00	0.4246
Regional per capita expenditures on non-VA mental health ($/adult)	1.00	0.2599	1.00	0.4432

PTSD, posttraumatic stress disorder.

suggesting that their overall demand for mental health services, including specialty mental health services, is substantially higher than that of men, illness rates and other sociodemographic factors held equal. Given higher overall utilization rates among women, we might interpret equal VA utilization rates across gender as an actual underutilization of VA services by women.

Community data often have reported that women are more likely than men to seek help for mental or physical problems, even after adjusting for sociodemographic and other indicators of access to, and need for, such help.[8,9] Because data from samples of male and female civilians (ie, non-veterans) were also available from the NVVRS, we were able to further assess whether the observed gender differences in demand for mental health services were peculiar to the veterans involved in this study. Additional logistic regression analyses, with adjustment for sociodemographic and diagnostic variables, indicated that although female veterans were 3.46 (95% CI = 2.75–4.35) times more likely to have used mental health services (both VA and non-VA) than male veterans, among civilians, women were 2.97 (95% CI = 1.99–4.44) times more likely to have used any mental health services than male civilians, approximately the same utilization rates for both populations.

A number of hypotheses have been suggested to explain these gender differences in service use, including differences in social role expectations, in subjective experiences of pain and other symptoms, in social acceptability of

TABLE 4. Use of Mental Health Services Among a Sample of Vietnam and Vietnam-Era Veterans Who Had a Lifetime History of a Mental Health or Substance Abuse Diagnosis

	Males		Females			
	n	%	*n*	%	OR*	*p*
Any lifetime diagnosis	899	100.00	216	100.00		
Use of VA outpatient mental health (MH)	146	16.31	34	15.81	0.99	0.9748
Use of any VA Inpatient MH	69	7.68	10	4.63	0.66	0.4131
Use of non-VA MH service	310	37.70	157	74.88	5.17	0.0001
Use of medical outpatient MH service	187	20.96	97	45.54	3.41	0.0001
Use of self-help (informal) MH service	206	30.91	104	54.72	3.45	0.0001
Lifetime diagnosis of depression	91	100.00	71	100.00		
Use of VA outpatient MH	44	48.89	20	28.17	2.58	0.2257
Use of VA inpatient MH	28	30.77	5	7.04	0.43	0.3568
Use of non-VA MH service	61	67.03	62	87.32	9.51	0.0028
Use of medical outpatient MH service	43	47.25	44	63.77	4.41	0.0117
Use of self-help (informal) MH service	43	47.25	42	60.00	4.79	0.0078
Lifetime diagnosis of PTSD	365	100.00	45	100.00		
Use of VA outpatient MH	106	29.2	18	40.00	1.10	0.8441
Use of VA inpatient MH	51	13.97	6	13.33	0.41	0.2638
Use of non-VA MH service	165	45.21	34	75.56	3.06	0.0163
Use of medical outpatient MH service	97	26.65	25	58.14	3.23	0.0078
Use of self-help (informal) MH service	130	35.71	26	59.09	2.44	0.0359
Lifetime diagnosis of substance abuse	675	100.00	65	100.00		
Use of VA outpatient MH	110	16.37	14	21.54	1.38	0.4884
Use of VA inpatient MH	58	8.59	6	9.09	0.81	0.7482
Use of Non-VA MH service	260	38.58	55	83.33	7.26	0.0001
Use of medical outpatient MH service	140	20.83	32	48.48	3.19	0.0004
Use of self-help (informal) MH service	222	32.99	43	66.15	3.37	0.0001
Lifetime diagnosis of other mental disorder	392	100.00	145	100.00		
Use of VA outpatient MH	108	27.55	25	17.24	0.96	0.9119
Use of VA inpatient MH	51	12.91	8	5.52	0.44	0.2179
Use of non-VA MH service	179	45.43	111	76.55	5.66	0.0001
Use of medical outpatient MH service	112	28.43	75	52.45	4.18	0.0001
Use of self-help (informal) MH service	135	34.35	80	55.94	3.60	0.0001

PTSD, posttraumatic stress disorder.
*Odds ratio adjusted for age, marital status, income, education, employment, service connection, health insurance, per capita expenditures for VA and non-VA mental health care, and psychiatric diagnoses.

reporting disease, in knowledge about how to obtain health care services, and in concern with health in general.[6,10,22-24] Regardless of the explanation for why women utilize mental health services more than men, the lack of a gender difference in use of VA mental health services in this sample seems to indicate an underutilization of VA services by female veterans, relative to their subjective demand for such services. To achieve equity of access, special efforts may be needed to enhance the acceptability of VA mental health services to female veterans. The development of women's specialty health clinics is one possible approach.

From a methodologic point of view, these findings point to incompletely understood complexities in the assessment of need, or demand, for mental health services. In this study, when need was defined simply as meeting diagnostic criteria for a psychiatric disorder, no differences were

seen between male and female veterans in their use of VA mental health services. The fact that female veterans use far more non-VA mental health services than male veterans, even after adjusting for the presence of psychiatric diagnoses, however, points to other determinants of need beyond psychiatric diagnosis. Further studies are needed to identify these determinants.

Before concluding, several limitations of these data should be acknowledged. First, these data may not be generalizable to all cohorts of veterans. In particular, the status of women in the military changed substantially during the Vietnam conflict but predated the establishment of an all-volunteer military in 1972. This makes female veterans of the Vietnam era different from either older or younger female veterans in their education and probably in their current access to health insurance and employment. Further research should be conducted to determine if other cohorts of female veterans have similar utilization patterns of mental health services. Second, we were able to partially adjust for access to mental health services through health insurance, income, and regional expenditures on VA and public mental health services; however, this may not completely account for all the factors that vary across regions in determining accessability of services, such as distance to the nearest VA facility or the availability of specialized services such as substance abuse treatment. Because the regional expenditures did not significantly explain any variation in the likelihood of use of VA mental health, we suspect that this additional information would not change the gender patterns found in these analyses. Future studies of utilization should account for these access variables as completely as possible.

Conclusions

Female veterans were not substantially different from female civilians in their overall demand for mental health services; however, they used more non-VA and, by implication, relatively less VA mental health services than their male counterparts. We suggest that being a distinct minority may decrease the likelihood that female veterans will utilize VA services, thus making minority status a barrier to specialty mental health care in VA. This hypothesis was further strengthened by analyses that indicated that other determinants of VA mental health use did not differ across gender. Clinically, this may imply the need for specialty mental health care for female veterans. Methodologically, these results point to the need for further studies of the subjective determinants of need or demand for mental health services across gender.

References

1. **Ruzek SB.** Access, cost and quality of medical care: Where are we heading? In: Women's Health: Complexities and Differences. Columbus, OH: Ohio State University Press, 1996.

2. **Zambrana RE.** A research agenda on issues affecting poor and minority women: A model for understanding their health needs. Women Health 1987;12:137.

3. **Tobin JN, Wassertheil-Smoller S, Wexler JP, Steingart RM.** Sex bias in considering coronary bypass surgery. Ann Intern Med 1987;107:19.

4. **Kutner NG, Brogan D.** Sex stereotypes and health care—the case of treatment for kidney failure. Sex Roles 1991;24:279.

5. **Caroline HA, Bernhard LA.** (1994) Health care dilemmas for women with serious mental illness. Adv Nurs Sci 1994;1693:78.

6. **Carmen EH, Russo NF, Miller JB.** Inequality and women's mental health: An overview. Am J Psychiatry 1981;138:1319.

7. **Mowbray CT, Herman SE, Hazel KL.** Gender and serious mental illness: A feminist perspective. Psychol Women Q 1992;16:107.

8. **Greenley JR, Mechanic D.** Social selection in seeking help for psychological problems. J Health Soc Behav 1976;17:249.

9. **Kessler RC, Brown RL, Browman CL.** Sex differences in psychiatric help-seeking: Evidence from four large scale surveys. J Health Soc Behav 1981;22:49.

10. **Gove WR, Tudor JF.** Adult sex roles and mental illness. Am J Sociology 1973;98:812.

11. **Gove WR, Swatford M.** Sex differences in the propensity to seek psychiatric treatment: Prevailing folk beliefs and misused log-linear analysis—comment on Kessler et al. Social Forces 1981;59:1281.

12. **Leaf PJ, Bruce ML, Tischler GL, Freeman DH, Weissman MM, Myers JK.** Factors affecting the utilization of specialty and general medical mental health services. Med Care 1988;26:9.

13. **Leaf PJ, Bruce ML.** Gender differences in the use of mental health-related services: A re-examination. J Health Soc Behav 1987;28:171.

14. **Alexander MJ.** Women with co-occurring addictive and mental disorders: An emerging profile of vulnerability. Am J Orthopsychiatry 1996;66:61.

15. **Rot** erans psycl

16. **Hol** health serv experience

17. **Ho** of VA heal

18. **Ku al.** Nation bles of find Brunner/M

19. **Ro KS.** Natio terview Sc Arch Gen

20. **Na** Health, U SA, eds. D

15. **Rothman GH.** Needs of female patients in a veterans psychiatric hospital. Social Work 1984;Jul/Aug:380.

16. **Hoff RA, Rosenheck RA.** Utilization of mental health services by women in a male environment: The VA experience. Psychiatr Serv 1997;48:1408.

17. **Hoff RA, Rosenheck RA.** Female veterans' use of VA health care services. Med Care 1998;36:1114.

18. **Kulka RA, Schlenger WE, Fairbank JA, et al.** National Vietnam Veterans Readjustment Study: Tables of findings and technical appendices. New York, NY: Brunner/Mazel Publishers, 1990.

19. **Robins LN, Helzer JE, Croughan J, Ratcliff KS.** National Institute of Mental Health Diagnostic Interview Schedule: Its history, characteristics, and validity. Arch Gen Psychiatry 1981;38:318.

20. **National Institute of Mental Health.** Mental Health, United States, 1987. Manderscheid RW, Barrett SA, eds. DHHS Pub. No. (ADM)87-1518. Washington, DC: Superintendent of Documents, US Government Printing Office, 1987.

21. **Rosenheck RA, Fontana A.** Do Vietnam-era veterans who suffer from Posttraumatic Stress Disorder avoid VA mental health services? Military Med 1995;160:136.

22. **Schwartz L.** Testimony for Congressional Subcommittee on Veterans Affairs, 1994.

23. **Mechanic D.** Effects of psychological distress on perceptions of physical health and use of medical and psychiatric facilities. J Human Stress 1978;Dec:26.

24. **Leaf PJ, Bruce ML, Tischler GL, Holzer CE.** The relationship between demographic factors and attitudes toward mental health services. J Commun Psychol 1987;15:275.

25. **Hibbard JH, Pope CR.** Gender roles, illness orientation, and use of medical services. Soc Sci Med 1983;17:129.